

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
16 June 2005 (16.06.2005)

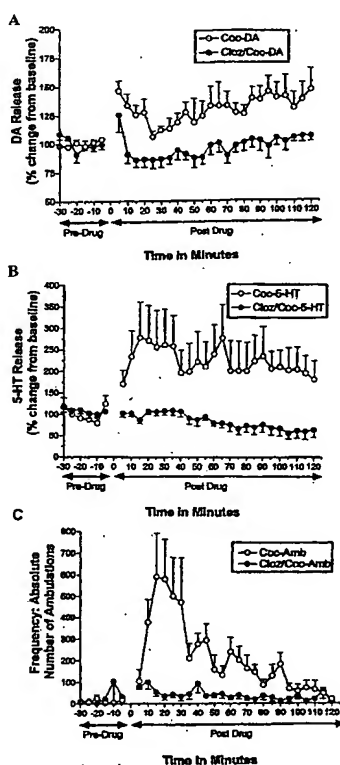
PCT

(10) International Publication Number  
**WO 2005/053619 A2**

- (51) International Patent Classification<sup>7</sup>: **A61K** (74) Agent: **LOMBILLO, Sybil, A.; MORGAN & FINNEGAN, LLP**, 3 World Financial Center, New York, New York 10281-2101 (US).
- (21) International Application Number: **PCT/US2004/040756**
- (22) International Filing Date: 6 December 2004 (06.12.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/526,833 4 December 2003 (04.12.2003) US
- (71) Applicant (for all designated States except US): **THE RESEARCH FOUNDATION OF THE CITY UNIVERSITY OF NEW YORK [US/US]**; 555 West 57th Street, New York, New York 10019 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **BRODERICK, Patricia, A. [US/US]**; 3261 Ampere Avenue, Bronx, New York 10465 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

[Continued on next page]

(54) Title: **CLOZAPINE AND COCAINE EFFECTS ON DOPAMINE AND SEROTONIN RELEASE IN NUCLEUS ACCUMBENS DURING PSYCHOSTIMULANT BEHAVIOR AND WITHDRAWAL**



(57) Abstract: The present invention provides methods of treating cocaine-induced psychosis by administering an atypical antipsychotic compound in an amount sufficient to increase serotonin concentration in the nucleus accumbens of a mammal. According to the invention, atypical antipsychotic compounds include, without limitation, clozapine, risperidone, olanzapine, quetiapine, ziprasidone, sertindole, ketanserin, aripiprazole, and haloperidol, flupenthixol, thioridazine, loxapine, fluspirilene, and sulpiride. The invention further provides methods for microvoltammetric imaging of changes in neurotransmitter concentrations in vivo and in real time comprising contacting the cell, cells, tissue, tissues, or organ of interest with a BRODERICK PROBE; sensor, applying a potential to said BRODERICK PROBE; sensor, and monitoring a temporally and spatially resolved recording using neuromolecular imaging (NMI) and electrochemical circuits such as, for example, voltammetry. In one embodiment of the invention, neuromolecular imaging may be performed before, during or after cocaine administration and/or cocaine-induced psychosis.

WO 2005/053619 A2



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

**Published:**

— without international search report and to be republished upon receipt of that report